CURRICULUM - VITAE



Dr. ABHISHEK KUMAR SINGH

Associate Professor Department of Mathematics and Computing Indian Institute of Technology (ISM) Dhanbad, India

PERSONAL INFORMATION :

| Date of Birth: Nationality: | 05-Sep-1981 INDIAN |
|--------------------------------|---|
| Email: | abhishek@iitism.ac.in, abhi.5700@gmail.com |
| Ph. No. | +91-9572159264 |
| Address: | Department of Mathematics and Computing, Science Block-307, |
| | Indian Institute of Technology (ISM) Dhanbad-826004, Jharkhand, India |

ACADEMIC QUALIFICATION :

| B. Sc. (Maths, Physics, Chemistry) | 2005 | University of Allahabad, Allahabad, |
|------------------------------------|------|-------------------------------------|
| | | India |
| M. Sc. (Mathematics and Computing) | 2007 | Indian School of Mines, Dhanbad, |
| | | India |
| M. Phil. (Applied Mathematics) | 2008 | Indian School of Mines, Dhanbad, |
| | | India |
| Ph.D. (Elastodynamics) | 2011 | Indian School of Mines, Dhanbad, |
| | | India |

ACADEMIC EXPERIENCE

| S.No. | Positions held | Name of the Institute | From | То | Pay Scale |
|-------|------------------------|---------------------------------|------------|------------|----------------------------------|
| | | | | | |
| 1 | Lecturer | Thapar University, Patiala | 17/01/2011 | 21/04/2011 | PB-3 (15,600-39,100) AGP-3000 |
| 2 | Lecturer | Thapar University, Patiala | 22/04/2011 | 16/04/2012 | PB-3 (15,600-39,100) AGP-6000 |
| 3 | Assistant Professor | Thapar University, Patiala | 17/04/2012 | 30/06/2013 | PB-3 (15,600-39,100) AGP-7000 |
| 4 | Assistant Professor | Indian School of Mines, Dhanbad | 01/07/2013 | 05/09/2013 | PB-3 (15,600-39,100) AGP-6000 |
| 5 | Assistant Professor | Indian School of Mines, Dhanbad | 06/09/2013 | 16/08/2014 | PB-3 (15,600-39,100) AGP-7000 |
| 6 | Assistant Professor | IIT (ISM), Dhanbad | 17/08/2014 | 16/08/2017 | PB-3 (15,600-39,100) AGP-8000 |

| 7 | Assistant Professor | IIT (ISM), Dhanbad | 17/08/2017 | 05/06/2019 | Pay Level 13A1 |
|---|------------------------|--------------------|------------|------------|----------------|
| 8 | Associate Professor | IIT (ISM), Dhanbad | 06/06/2019 | Till date | Pay Level 13A2 |

HONORS/ AWARDS/:

| S.No. | Name of Award | Awarding Agency | Year |
|-------|------------------------------------|--|-----------|
| | | | |
| 1 | Canara Bank Research Publication | IIT (ISM), Dhanbad | 2018 |
| | Award | | |
| 2 | Canara Bank Research Publication | IIT (ISM), Dhanbad | 2017 |
| | Award | | |
| 3 | Performance Incentive Scheme | Thapar University, Patiala | 2011-2012 |
| 4 | Best Poster Presentation Award for | 97th INDIAN SCIENCE CONGRESS held in | 2010 |
| | Mathematical Science | Kerala University, Thiruvananthapuram, Kerala, | |
| | | India during 3-7 Jan 2010. | |

MEMBERSHIP IN SCIENTIFIC ORGANIZATIONS:

- 1. Presently Life member (Membership No. L15019) of "*THE INDIAN SCIENCE CONGRESS ASSOCIATION*", Kolkata, India.
- 2. Presently Life member of "VON KARMAN SOCIETY FOR ADVANCED STUDY AND RESEARCH IN MATHEMATICAL AND SOCIAL SCIENCES", Jalpaiguri, West Bengal.
- 3. Presently Life member of "THE INDIAN MATHEMATICAL SOCIETY", Pune, India.
- 4. Outreach Member of "Society for Industrial and Applied Mathematics" with reference number as 7242156042.

REVIEWER:

Serving as reviewer to some SCI journals of American Society of Civil Engineers (ASCE), SAGE, Springer, Elsevier, World Scientific, Taylor & Francis etc.

DETAILS OF PHD SUPERVISION:

| Details | As a Sole Guide | As a Principal Guide (with a Co-guide) | As a Co-guide | Total |
|------------------------------|-----------------|---|---------------|-------|
| No. of PhD supervised | 15 | 07 | 01 | 23 |
| No. of PhD under Supervision | 08 | 01 | 00 | 09 |

DETAILS of M.Phil. PROJECT SUPERVISION:

No. of M.Phil. Supervised/Awarded as: 02

DETAILS OF EXTERNALLY FUNDED SPONSORED RESEARCH PROJECTS:

| S N | Project Title | Project No. of Funding Agency Dhanbad | Project No. of IIT(ISM) Dhanbad | Sanctioned Amount in INR | Received Amount in INR | Role (PI/ CO- PI) | No. of CO | Funding Agency | Duration/ Status |
|--------|--|--|---|--------------------------------|------------------------------|----------------------------|-----------------|-------------------|-----------------------|
| | | | | | | / | PIs | | |
| 1 | MATHEMATICALSTUDYONWAVE PROPAGATIONASPECTS INPIEZOELECTRICCOMPOSITESTRUCTURESWITHCOMPLEXITIES | EMR/2016/0 03985, Dated March 15, 2017 | DST(SERB)/ (167)/2016- 2017/510/A M | 14,69,000 | 13,72,666 | PI | 0 | DST SERB | 3 Yrs/ Completed |
| 2 | STUDY OF WAVE PROPAGATION ASPECTS IN PIEZOELECTRIC, PIEZOMAGNETIC AND FUNCTIONALLY GRADED PIEZOELECTRIC COMPOSITE STRUCTURES | 25(0265)/17/ EMR-II, Dated April 27, 2017 | CSIR(25)/20 17- 2018/522/A M | 16,33,002 | 16,33,002 | PI | 0 | CSIR | 3 Yrs/ Completed |
| 3 | MATHEMATICAL MODELLING OF ELASTIC WAVE PROPAGATION IN HIGHLY ANISOTROPIC AND HETEROGENEOUS MEDIA | 2/48(3)/2016 /NBHM(R.P.)/R&D II/4528, Dated March 31, 2017 | NBHM/2017 - 2018/528/A M | 14,38,000 | 13,36,442 | PI | 1 | NBHM | 3 Yrs/ Completed |
| 4 | MATHEMATICAL STUDY ON THE ANALYSIS OF THERMOELASTIC DAMPING AND FREQUENCY SHIFT IN THERMOELASTIC MICRO/NANO-SCALE BEAMS WITH COMPLEXITIES | MTR/2021/0 00525, Dated Feb 14, 2022 | DST(SERB)/ (321)/2021- 2022/873/M nC | 6,60,000 | 4,40,000 | PI | 0 | DST SERB | 3 Yrs/Ongoi ng |
| 5 | MATHEMATICAL MODELLING OF SEISMIC WAVE PROPAGATION IN COMPOSITE LAYERED STRUCTURES | EMR/2017/0 00263, Dated August 08, 2017 | DST(SERB)/ (177)/2017- 2018/532/A M | 15,19,000 | 13,73,030 | CO-PI | 1 | DST SERB | 3 years/ Completed |

DETAILS OF OUTREACH PROGRAMMES (EDPS/PDPS/MDPS/CONFERENCES/SEMINARS ORGANISED):

| Sl no. | Title | Number Assigned to the Course | External Funding in INR | Funding Agency | Role (CI/Co-CI) | Duration | Status |
|-----------|---|----------------------------------|-------------------------------|---|--|--------------------------------------|-----------|
| 1 | MATHEMATICAL MODELLING OF ELASTODYNAMIC PROBLEMS | CONS/3594/2017- 2018 | 1,88,884 | Various Organization (Externally Funded) | CI- Myself | 5 days (August 3-7, 2017) | Completed |
| 2 | RELIABILITY AND SAFETY ANALYSIS | CONS/3230/2016-17 | 2,06,421 | Various Organization (Externally Funded) | Co-CI- Myself CI-Prof. Subhashis Chatterjee | 5 days (June 20- 24, 2016) | Completed |
| 3 | NATIONAL CONFERENCE ON WAVE MECHANICS AND VIBRATIONS | | 3,85,000 | DST NEW DELHI and JHARKHAND DST | Organizing Secretary/ Co-CI- Myself Convener-Prof. Sanjeev Anand Sahu | 3 days (December 21- 23, 2015) | Completed |
| 4 | SEVEN DAYS ONLINE WORKSHOP ON "BUILDING INTERNET SCALE APPLICATIONS" | EDP/7163/2023-24 | 70,800 | Various Organization (Externally Funded) | CI- Myself Co-CI- Prof. Subhashis Chatterjee Co-CI- Prof. Saurabh Srivastava | 7 days (16-22 December, 2023) | Completed |

BOOK CHAPTERS:

| S.No. | Title | Authors | Publisher | Year of Publication |
|-------|--|-----------------|------------|------------------------|
| 1 | APPLICATION OF POLYNOMIAL FUNCTIONS IN | A. K. Singh & | IOP | 2022 |
| | ANALYZING ANTI-PLANE WAVE PROFILES IN | S. Singh | Publishing | |
| | A FUNCTIONALLY GRADED PIEZOELECTRIC- | U | Ltd | |
| | VISCOELASTIC-POROELASTIC STRUCTURE | | | |
| | WITH BUFFER LAYER | | | |
| 2 | MATHEMATICAL STUDY OF REFLECTION AND | A. K.Singh & | World | 2022 |
| | TRANSMISSION PHENOMENON OF PLANE | S. Guha | Scientific | |
| | WAVES AT THE INTERFACE OF TWO | | | |
| | DISSIMILAR INITIALLY STRESSED ROTATING | | | |
| | MICRO-MECHANICALLY MODELED | | | |
| | PIEZOELECTRIC FIBER-REINFORCED | | | |
| | COMPOSITE HALF-SPACES. | | | |
| 3 | PROPAGATION OF EDGE WAVE IN | P. Kumar, | Springer | 2020 |
| | HOMOGENEOUS VISCOELASTIC SANDY MEDIA | A. Chattopadhy | Link | |
| | | ay, A. K. Singh | | |
| 4 | ANTI-PLANE SHEAR WAVE IN | M. S. Chaki &, | IGI Global | 2019 |
| | MICROSTRUCTURAL MEDIA: A CASE WISE | A. K. Singh | | |
| | STUDY OF MICROPOLARITY, IRREGULAR, AND | | | |
| | NON-PERFECT INTERFACE | | | |
| 5 | IMPACT OF RECTANGULAR/PARABOLIC | MS Chaki, S | Springer | 2018 |
| | SHAPED IRREGULARITY ON THE | Guha, & AK | Link | |
| | PROPAGATION OF SHEAR HORIZONTAL WAVE | Singh | | |
| | IN A SLIGHTLY COMPRESSIBLE LAYERED | | | |
| | STRUCTURE | | | |

ADMINISTRATIVE TASKS:

- 1. Served as ACTING DEAN (INFORMATION SYSTEMS) for the duration May 27, 2021 to October 20, 2023.
- 2. Served as **HEAD AUTOMATION CENTRE** for the duration May 27, 2021 to October 20, 2023.
- 3. Served as HEAD COMPUTER CENTRE for the duration May 27, 2021 to October 20, 2023.
- 4. Served as ASSOCIATE DEAN (AUTOMATION) for the duration September 30, 2019 to June 21, 2021.
- 5. Served as **CHAIRMAN, DOCUMENTATION CELL**, IIT(ISM), Dhanbad for the duration December 10, 2018 to June 26, 2020.
- 6. Served as a **NODAL OFFICER, DOCUMENTATION CELL**, IIT(ISM) Dhanbad for the duration April 23, 2018 to December 09, 2018.
- 7. Served as WARDEN, JASPER HOSTEL (D- BLOCK) for 04 years (from 1st June 2014 to 31st May 2018).
- 8. Served as JOINT SECRETARY ISMAA (INDIAN SCHOOL OF MINES ALUMNI ASSOCIATION).
- 9. Served as a **MEMBER, MONITORING AND REVIEW CELL** in IIT(ISM), Dhanbad from August 24, 2018 to September 29, 2019.
- 10. Served as **DFSC** (**DEPARTMENT FACULTY SCRUTINY COMMITTEE**) from July 26, 2019 to Nov 30, 2020.
- 11. Served as NODAL OFFICER from IIT(ISM) Dhanbad for NIRF-2019, NIRF-2020 and NIRF-2021.
- 12. Served as a CONVENER SRIJAN-2019, the Socio-Cultural Festival of IIT(ISM) Dhanbad.
- 13. Served as a **CO-CONVENER BASANT-2019**, the Alumni Reunion of IIT (ISM) Dhanbad.
- 14. Served as a CO-CONVENER SRIJAN-2018, the Socio-Cultural Festival of IIT (ISM) Dhanbad.
- 15. Served as a FACULTY-IN-CHARGE ATHLETICS, Sports and Physical Education Centre, IIT(ISM), Dhanbad.
- 16. Presently serving as DFSC (Department Faculty Scrutiny Committee) from Jan 24, 2024 to till date.
- 17. Presently serving as a member of DGRC (Departmental Grievance Redressal Committee) from Feb 28, 2024 to till date.

18. Presently serving as a Vice-Chairperson (PG/PhD) CDC from July 01, 2024 to till date.

EXTRA CURRICULAR ACTIVITIES:

- 1. **BEST ATHLETE STAFF (MEN) AWARD** of IIT(ISM) Dhanbad in **three consecutive years** 2017-18, 2018-19 & 2019-20.
- 2. **FIRST POSITION holder in Hindi Essay Writing Competition** in Teachers and Officers category for two consecutive years organized during Hindi Pakhwada-2015 and Hindi Pakhwada-2016 at IIT(ISM) Dhanbad.
- 3. **SECOND POSITION holder in Hindi Essay Writing Competition** in Teachers and Officers category organized during Hindi Pakhwada 2017 at IIT(ISM) Dhanbad.

PUBLICATIONS:

International Journal

- Kumari, R., Singh, K. A., Kumar, S., & Guha, S. (2024). Transmission of Lamb wave in a micro-mechanically piezoelectric fiber-reinforced composite plate. *Wave Motion*, 103307. https://doi.org/10.1016/j.wavemoti.2024.103307
- 2. Singh, S. and Singh, A.K., (2024). BG waves in a piezo-flexo-magnetic layered model with impedance boundary and imperfect interface. *Acta Mechanica*, pp.1-17.
- 3. Koley, S., **Singh, A.K.** and Negi, A., (2024). Scattering and reflection phenomena of SH-waves propagation through the surface irregularity in an orthotropic viscoelastic structure. *Acta Mechanica*, pp.1-16.
- 4. Mahanty, M., Kumar, P., **Singh, A.K.** and Chattopadhyay, A., (2024). Analytical study on transverse behaviour of Love-type waves in a corrugated cylindrical composite structure: A perturbation theory. *International Journal of Non-Linear Mechanics*, 160, p.104660.
- 5. Singh, S. and Singh, A.K., (2024). Anti-plane waves in a liquid-loaded piezo-flexo-electric layered model with interface energy. *Mathematics and Mechanics of Solids*, p.10812865241239600.
- Singh, A.K., Singh, S. & Koley, S. (2023). Reflection of plane wave at an initially stressed rotating piezo-electromagnetic-fiber-reinforced Composite half-space. *The European Physical Journal Plus* 138, 296. https://doi.org/10.1140/epjp/s13360-023-03907-4
- Negi A., Singh A. K. & Koley S. (2023). On the Scattering of Love Waves in a Layered Transversely Isotropic Irregular Poro-viscoelastic Composite Rock Structure, *Journal of Earthquake Engineering*, 27:7, 1900-1919, DOI: 10.1080/13632469.2022.2089406
- 8. A. Srivastava, **Singh A. K.** & Chattopadhyay A. (2023). Reflection and transmission of three-dimensional plane wave at an imperfectly bonded interface between two distinct rotating functionally graded triclinic media, *Waves in Random and Complex Media*. DOI: 10.1080/17455030.2023.2203271.
- 9. Singh A. K., Singh A. K., Guha S. & Kumar D. (2023). Mathematical analysis on the propagation of Griffith crack in an initially stressed strip subjected to punch pressure, *Mechanics Based Design of Structures and Machines*, DOI:10.1080/15397734.2023.2223614
- 10. Guha S. & Singh A. K. (2022). Frequency shifts and thermoelastic damping in distinct Micro-/Nano-scale piezothermoelastic fiber-reinforced composite beams under three heat conduction models, *Journal of Ocean Engineering and Science*, ISSN 2468-0133, DOI: https://doi.org/10.1016/j.joes.2022.06.015
- 11. Singh, A. K., Kumari, R., & Dharmender. (2022). Green's function analysis of mass loading sensitivity on the shear wave propagation induced by a point source in piezo-electro-magnetic structure. *Mechanics Based Design of Structures and Machines*, 50(10), 3511-3532
- 12. Kumari, R., & Singh, A. K. (2022). Dispersion and attenuation of shear wave in couple stress stratum due to point source. *Journal of Vibration and Control*, 28(13-14), 1754-1768.
- 13. Singh, S., Singh, A. K., & Guha, S. (2022). Reflection of plane waves at the stress-free/rigid surface of a micromechanically modelled Piezo-Electro-Magnetic Fiber-Reinforced half-space. *Waves in Random and Complex Media*, 1-30.
- 14. Singh, A. K., & Singh, A. K. (2022). Dynamic stress concentration of a smooth moving punch influenced by a shear wave in an initially stressed dry sandy layer. *Acta Mechanica*, 1-12.
- 15. Singh, A. K., & Singh, A. K. (2022). Analysis on the propagation of crack in a functionally graded orthotropic strip under pre-stress. *Waves in Random and Complex Media*, 1-19.

- Singh, A. K., Rajput, P., Guha, S., & Singh, S. (2022). Propagation characteristics of love-type wave at the electromechanical imperfect interface of a piezoelectric fiber-reinforced composite layer overlying a piezoelectric halfspace. *European Journal of Mechanics-A/Solids*, 104527.
- 17. Guha, S. & Singh, A. K. (2022). Influence of varying fiber volume fractions on plane waves reflecting from the stress-free/rigid surface of a piezoelectric fiber-reinforced composite half-space. *Mechanics of Advanced Materials and Structures*, 29(27), 5758–5772.
- Pal, M. K., Singh, A. K., & Kumari, R. (2022). Reflection of plane waves on the stress-free and rigid boundary surfaces of pre-stressed piezoelectric-orthotropic substrate: A comparative approach. *Mechanics of Advanced Materials and Structures*, 29(6), 816–827.
- 19. Singh, A. K., Rajput, P., & Chaki, M. S. (2022). Analytical study of Love wave propagation in functionally graded piezo-poroelastic media with electroded boundary and abruptly thickened imperfect interface. *Waves in Random and Complex Media*, 32(1), 463–487.
- Srivastava, A., Chattopadhyay, A., & Singh, A. K. (2022). Influence of doubly loaded elastic void pores and distinct inhomogeneity in the sandwiched layered composite structure. *Waves in Random and Complex Media*, 32(1), 233– 250.
- 21. Guha, S., Singh, A. K. & Das, A. (2021). Analysis on different types of imperfect interfaces between two dissimilar piezothermoelastic half-spaces on reflection and refraction phenomenon of plane waves, *Waves in Random and Complex Media*, 31(4), 660-689.
- 22. Saha, S., Singh, A. K., & Chaki, M. S. (2021). Analysis of generated shear wave due to stress discontinuity in a monoclinic layered structure. *Waves in Random and Complex Media*, 1-29.
- Singh, A. K., Mahto, S., & Guha, S. (2021). Analysis of plane wave reflection and transmission phenomenon at the interface of two distinct micro-mechanically modeled rotating initially stressed piezomagnetic fiber-reinforced halfspaces, *Mechanics of Advanced Materials and Structures* 29(28), 7623–7639.
- Singh, S., Singh, A. K., & Guha, S. (2021). Shear waves in a Piezo-Fiber-Reinforced-Poroelastic composite structure with sandwiched Functionally Graded Buffer Layer: Power Series approach. *European Journal of Mechanics-A/Solids*, 104470.
- 25. Singh, A. K., Mahto, S., & Guha, S. (2021). Analysis of plane wave reflection phenomenon from the surface of a micro-mechanically modeled piezomagnetic fiber-reinforced composite half-space. *Waves in Random and Complex Media*, 1-22.
- 26. Singh, A. K., Koley, S., & Chaki, M. S. (2021). Generation and Propagation of SH Waves Due to Shearing Stress Discontinuity in Linear Orthotropic Viscoelastic Layered Structure. *International Journal of Applied and Computational Mathematics*, 7(6), 1-23.
- 27. Singh, A. K., Ray, A., & Kumari, R. (2021). A new dispersive wave with Love-type waves in a microstructure due to an impulsive point source. *Waves in Random and Complex Media*, 1-23.
- 28. Chaki, M. S., & Singh, A. K. (2021). Scattering and propagation characteristics of SH wave in reduced Cosserat isotropic layered structure at irregular boundaries. *Mathematical Methods in the Applied Sciences*, 44(7), 6143-6163.
- 29. Singh, A. K., Kaur, T., Saha, S., Kumar, S., & Chattopadhyay, A. (2021). Study on propagation characteristics of SH-wave in an imperfectly bonded functionally graded structure with viscoelastic stratum and fibre-reinforced substrate. *Arabian Journal of Geosciences*, 14(14), 1-15.
- 30. Ray, A., & Singh, A. K. (2021). Impact of imperfect corrugated interface in piezoelectric-piezomagnetic composites on reflection and refraction of plane waves. *The Journal of the Acoustical Society of America*, 150(1), 573-591.
- Singh, P., Singh, A. K., & Chattopadhyay, A. (2021). Reflection of three-dimensional plane waves at the free surface of a rotating triclinic half-space under the context of generalized thermoelasticity. *Applied Mathematics and Mechanics*, 42(9), 1363-1378.
- 32. Singh, P., Chattopadhyay, A., & Singh, A. K. (2021). Propagation of Love-type wave in functionally graded prestressed magneto-visco-elastic fiber-reinforced composite structure. *Waves in Random and Complex Media*, 31(5), 942-971.
- 33. Kumar, P., Mahanty, M., Singh, A. K., & Chattopadhyay, A. (2021). Analytical study on shear wave propagation in anisotropic dry sandy spherical layered structure. *Applied Mathematical Modelling*.
- Pal, M. K., & Singh, A. K. (2021). Analysis of reflection and transmission phenomenon at distinct bonding interfaces in a rotating pre-stressed functionally graded piezoelectric-orthotropic structure. *Applied Mathematics and Computation*, 409, 126398.
- 35. Mahanty, M., Kumar, P., **Singh, A. K.**, & Chattopadhyay, A. (2021). Green's function analysis of shear wave propagation in heterogeneous poroelastic sandwiched layer influenced by an impulsive source. *Wave Motion*, 107, 102821
- 36. Singh, P., **Singh, A. K.**, & Chattopadhyay, A. (2021). Influence of distinct type of imperfect interfaces on reflection and transmission phenomena of triclinic thermoelastic structure. *Journal of Thermal Stresses*, 44(9), 1096-1120.

- 37. Singh, A. K., & Kumari, R. (2021). Scattering of plane SH waves on an irregular piezomagnetic stratum-substrate structure. *Applied Mathematical Modelling*, 100, 240-262.
- 38. Singh, S., Singh, A. K., & Guha, S. (2021). Impact of interfacial imperfections on the reflection and transmission phenomenon of plane waves in a Porous-Piezoelectric model. *Applied Mathematical Modelling*, 100, 656-675.
- Guha, S., & Singh, A. K. (2021). Frequency shifts and thermoelastic damping in different types of Nano-/Microscale beams with sandiness and voids under three thermoelasticity theories. *Journal of Sound and Vibration*, 116301.
- 40. Guha, S., & Singh, A. K. (2021). Plane wave reflection/transmission in imperfectly bonded initially stressed rotating piezothermoelastic fiber-reinforced composite half-spaces. *European Journal of Mechanics-A/Solids*, 104242.
- 41. Pal, M. K., & Singh, A. K. (2021). On the characteristics of reflected waves in Rotating Functionally graded initially stressed piezoelectric-orthotropic half-space. *Waves in Random and Complex Media*, 33(4), 899–913.
- 42. Singh, S., Singh, A.K. (2021) Anti-plane surface and interfacial waves influenced by layer reinforcement in Piezo-Electro-Magnetic structures with surface energy. *The European Physical Journal Plus*, 136(3), 1-20.
- 43. Kumari, R., Singh, A. K., & Ray, A. (2021). Love-type wave in low-velocity piezoelectric-viscoelastic stratum with mass loading. *Acta Mechanica*, 232(4), 1253-1271.
- 44. Mahanty, M., Kumar, P., **Singh, A. K**., & Chattopadhyay, A. (2021). Analysis on the propagation of Griffith crack in a magnetoelastic self-reinforced strip subjected to moving punch of constant load. *Archive of Applied Mechanics*, 91, 791–808.
- 45. Kumar, P., Singh, A. K., & Chattopadhyay, A. (2021). Influence of an impulsive source on shear wave propagation in a mounted porous layer over a foundation with dry sandy elastic stratum and functionally graded substrate under initial stress. *Soil Dynamics and Earthquake Engineering*, 142, 106536.
- 46. Kumar, P., Mahanty, M., Singh, A. K., & Chattopadhyay, A. (2021). Analytical study on stress intensity factor due to the propagation of Griffith crack in a crystalline monoclinic layer subjected to punch pressure. *Fatigue & Fracture of Engineering Materials & Structures*, 44(2), 475-487.
- 47. Ray, A., & Singh, A. K. (2021). Electromechanical coupling and mass loading sensitivity of SH waves in a dielectrically imperfect piezoelectric structure. *International Journal of Solids and Structures*, 210, 49-65.
- 48. Singh, P., Singh, A. K., & Chattopadhyay, A. (2021). Reflection and transmission of thermoelastic waves at the corrugated interface of crystalline structure. *Journal of Thermal Stresses*, 44(4), 469–512.
- 49. Saha, S., Singh, A. K., & Chattopadhyay, A. (2021). Impact of curved boundary on the propagation characteristics of Rayleigh-type wave and SH-wave in a prestressed monoclinic media. *Mechanics of Advanced Materials and Structures*, 28(12), 1274–1287.
- 50. Singh, A. K., Agarwalla, S., Chaki, M. S., & Chattopadhyay, A. (2021). Shear wave propagation in a slightly compressible finitely deformed layer over a foundation with pre-stressed fibre-reinforced stratum and dry sandy viscoelastic substrate. *Waves in Random and Complex Media*, 31(5), 847–866.
- 51. Singh, A. K., Singh, A. K., & Yadav, R. P. (2020). Stress Intensity Factor of Dynamic Crack in Double-Layered Dry Sandy Elastic Medium due to Shear Wave under Different Loading Conditions. *International Journal of Geomechanics*, 20(11), 04020215.
- 52. Singh, P., Singh, A. K., Chattopadhyay, A., & Guha, S. (2020). Mathematical study on the reflection and refraction phenomena of three-dimensional plane waves in a structure with floating frozen layer. *Applied Mathematics and Computation*, 386, 125488.
- 53. Guha, S., & Singh, A. K. (2020). Effects of Initial Stresses on reflection phenomenon of plane waves at the free surface of a Rotating Piezothermoelastic Fiber-Reinforced Composite half-space. *International Journal of Mechanical Sciences*, 105766.
- 54. Singh, A.K., Singh, S., Kumari, R. Ray, A. (2020). Impact of point source and mass loading sensitivity on the propagation of an SH wave in an imperfectly bonded FGPPM layered structure. *Acta Mechanica* 231, 2603–2627.
- Chaki, M. S., & Singh, A. K. (2020). The impact of reinforcement and piezoelectricity on SH wave propagation in irregular imperfectly-bonded layered FGPM structures: An analytical approach. *European Journal of Mechanics-A/Solids*, 80, 103872.
- 56. Ray, A., & Singh, A. K. (2020). Love-type waves in couple-stress stratum imperfectly bonded to an irregular viscous substrate. *Acta Mechanica*, 231(1), 101-123.
- 57. Negi, A., Singh, A. K., & Yadav, R. P. (2020). Analysis on dynamic interfacial crack impacted by SH-wave in bimaterial poroelastic strip. *Composite Structures*, 233, 111639.
- Mahanty, M., Kumar, P., Singh, A. K., & Chattopadhyay, A. (2020). On the characteristics of shear acoustic waves propagating in an imperfectly bonded functionally graded piezoelectric layer over a piezoelectric cylinder. *Journal* of Engineering Mathematics, 120(1), 67-88.

- 59. Mahanty, M., Kumar, P., **Singh, A. K.**, & Chattopadhyay, A. (2020). Dynamic response of an irregular heterogeneous anisotropic poroelastic composite structure due to normal moving load. *Acta Mechanica*, 231, 2303-2321.
- P. Kumar, M. Mahanty, A. Chattopadhyay, A.K. Singh, (2020). Green's function technique to study the influence of heterogeneity on SH-wave propagation due to a line source in composite layered structure, *Journal of Vibration and Control*, 26(9-10), 701-712.
- Srivastava, A., Chattopadhyay, A., & Singh, A. K. (2020). Analysis of reflection and transmission of three dimensional plane wave in an intermediate fluid layer embedded between two viscoelastic anisotropic semi-infinite media. *International Journal of Mechanical Sciences*, 170, 105007.
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